Technical Data Sheet: Neuthane 802NG Series

MDI - Ester Quasi Systems (3 & 4 Component)

v2 13 June 2019

www.notedome.com

QUALITY SYSTEM CERTIFICATION DNV·GL ISO 9001:2015

notedome

Neuthane 802-NG (3 & 4 Component) MDI - Ester Quasi Systems (55 - 95 Shore A)

Properties	Processing	Special Considerations
The Neuthane 802 series are high performance MDI - ester quasi systems designed to produce items for use in arduous application areas. They offer: • a high level of physical properties • good cut and abrasion resistance • good chemical resistance • higher levels of physical properties at low end of the hardness range compared to TDI systems • low process temperatures **Typical Applications** • Wheels (e.g. pallet truck) • Mining and quarrying (e.g. screen decks, scraper blades) • Oil and gas industry (e.g. gaskets, pipe pigs) • Automotive (e.g. suspension bushes) • Concrete Industry (e.g. moulds for decorative slabs and walls	Processing can be carried out by hand or by dispensing machine. **Hand Processing** • Melt ISO component at 45°C, POLYOL components at 55°C for 12-24 hours (Excluding Plast NG for 4 component system) • Ensure components are completely liquid and thoroughly mixed prior to use • Bring all components to the recommended process temperature. • Add pigments and Antifoam (as applicable) to the polyol component whilst mixing • It is recommended that air be removed from the ISO component under vacuum prior to addition of the curative • Add all components and thoroughly mix ensuring that no unmixed material is left on the container sides (if necessary the mix can be transferred to a second clean container and mixed again) • Remove air under vacuum • Cast into moulds, preheated to the recommended temperature • Cure as recommended	**Processing** • Avoid moisture contamination of all materials. • Part used containers should be flushed with dry nitrogen and resealed immediately after use • It is vital to ensure that both components are completely liquid and thoroughly mixed prior to use • Due to the exothermic nature of the system, larger mixes will have a shorter pot life **Alternatives** • ***Humid/Wet*** **-** PTMEG ether based systems should be considered: Neuthane 100 [TDI], Neuthane 600 [MDI] or Neuthane 500 [Aliphatic] • ***Dynamic/Resilience*** **-** PTMEG ether based materials should be considered: Neuthane 100 [TDI], Neuthane 600 [MDI] or Neuthane 801 [MDI Quasi] • ***Temperature*** **–** Neuthane 100 [TDI PTMEG] or Neuthane 500 [Aliphatic Isocyanate] systems may be considered

COST	PROCESSING	ABRASION	DYNAMIC	RESILIENCE	SOLVENT	HUMID/WET	TEMPERATURE	UV STABILITY

Key Excellent / Good | Good / Average | Average / Poor

Neuthane 802-NG (3 Component) MDI - Ester Quasi Systems (55 - 95 Shore A)

Hardness		55	60	65	70	75
Mix Ratio N802 ISO-NG	by weight	100	100	100	100	100
Mix Ratio N802 POLY-NG UC	by weight	338.1	163.78	132.62	111.35	86.29
Mix Ratio N802 POLY-NG 95A	by weight	0	28.87	34.03	37.56	41.71
Neuthane 802 ISO-NG Temperature	°C	45	45	45	45	45
Neuthane 802 POLY-NG Temperature	°C	55	55	55	55	55
Neuthane 802 POLY 95A Temperature	°C	55	55	55	55	55
Optimum Mould Temperature	°C	90 - 100	90 - 100	90 - 100	90 - 100	90 - 100
Pot life (250g mix adjustable with Cat 44 level)	minutes	2-4	2-4	2-4	2-4	2-4
Recommended Cure Temperature / Time	°C / hrs	70 / 16	70 / 16	70 / 16	70 / 16	70 / 16

Hardness	**DIN 2240-91**	Shore A	**55**	**60**	**65**	**70**	**75**
	DIN 2240-91	Shore D	-	-	-	-	-
100% Modulus	BS 903 Pt A2 - ISO 37	lb/in² (Mpa)	188 (1.3)	275 (1.9)	377 (2.6)	449 (3.1)	507 (3.5)
300% Modulus	BS 903 Pt A2 - ISO 37	lb/in² (Mpa)	275 (1.9)	464 (3.2)	667 (4.6)	841 (5.8)	855 (5.9)
Tensile Strength	BS 903 Pt A2 - ISO 37	lb/in² (Mpa)	2755 (19)	3480 (24)	3770 (26)	3916 (27)	5221 (36)
Elongation at Break	BS 903 Pt A2 - ISO 37	%	855	680	620	610	600
Tear (Die C)	ISO 34-1	KN/m	28.7	42	53	59	71
Tear (Trouser)	ISO 34-1	N/mm	10	11	18	18	19
Abrasion loss	DIN 53516	mm³	< 40	< 40	< 40	< 40	< 40
Resilience	ASTM D 2632-92	%	52	50	50	49	45
Specific Gravity		g/cm³	1.16	1.17	1.17	1.18	1.18

Neuthane 802-NG (3 Component) MDI - Ester Quasi Systems (55 - 95 Shore A)

Hardness		80	85	90	95
Mix Ratio N802 ISO-NG	by weight	100	100	100	100
Mix Ratio N802 POLY-NG UC	by weight	50	34.93	16.8	0
Mix Ratio N802 POLY-NG 95A	by weight	47.72	50.21	53.22	56
Neuthane 802 ISO-NG Temperature	°C	45	45	45	45
Neuthane 802 POLY-NG Temperature	°C	55	55	55	55
Neuthane 802 POLY 95A Temperature	°C	55	55	55	55
Optimum Mould Temperature	°C	90 - 100	90 - 100	90 - 100	90 - 100
Pot life (250g mix adjustable with Cat 44 level)	minutes	2-4	2-4	2-4	2-4
Recommended Cure Temperature / Time	°C / hrs	70 / 16	70 / 16	70 / 16	70 / 16

Hardness	**DIN 2240-91**	Shore A	**80**	**85**	**90**	**95**
	DIN 2240-91	Shore D	-	-	-	-
100% Modulus	BS 903 Pt A2 - ISO 37	lb/in² (Mpa)	710 (4.9)	884 (6.1)	1102 (7.6)	1392 (9.6)
300% Modulus	BS 903 Pt A2 - ISO 37	lb/in² (Mpa)	1421 (9.8)	1609 (11.1)	2059 (14.2)	2509 (17.3)
Tensile Strength	BS 903 Pt A2 - ISO 37	lb/in² (Mpa)	6671 (46)	7687 (53)	7687 (53)	8122 (56)
Elongation at Break	BS 903 Pt A2 - ISO 37	%	600	600	590	570
Tear (Die C)	ISO 34-1	KN/m	83	92	100	116
Tear (Trouser)	ISO 34-1	N/mm	24	26	32	43
Abrasion loss	DIN 53516	mm³	< 40	< 40	< 40	< 40
Resilience	ASTM D 2632-92	%	40	36	36	35
Specific Gravity		g/cm³	1.18	1.18	1.18	1.18

Neuthane 802-NG (4 Component) MDI - Ester Quasi Systems (35 - 55 Shore A)

Hardness		35	40	45	50	55
Mix Ratio N802 ISO-NG	by weight	172.84	166.33	159.17	155.49	100
Mix Ratio N802 POLY-NG UC	by weight	183.92	183.92	183.92	183.92	338.10
Mix Ratio N802 POLY-NG 95A	by weight	47.20	47.20	47.20	47.20	0
Mix Ratio N802 Plast NG	by weight	276.90	222.00	167.18	135.00	0
Neuthane 802 ISO-NG Temperature	°C	45	45	45	45	45
Neuthane 802 POLY-NG Temperature	°C	55	55	55	55	55
Neuthane 802 POLY 95A Temperature	°C	55	55	55	55	55
Neuthane 802 PLAST NG Temperature	°C	40	40	40	40	40
Optimum Mould Temperature	°C	90 - 100	90 - 100	90 - 100	90 - 100	90 - 100
Pot life (250g mix adjustable with Cat 44 level)	minutes	4-8	4-8	4-8	4-8	4-8
Recommended Cure Temperature / Time	°C / hrs	70 / 16	70 / 16	70 / 16	70 / 16	70 / 16

Hardness	**DIN 2240-91**	Shore A	**35**	**40**	**45**	**50**	**55**
	DIN 2240-91	Shore D	-	-	-	-	-
100% Modulus	BS 903 Pt A2 - ISO 37	lb/in² (Mpa)	110 (0.76)	130 (0.9)	151 (1.04)	157 (1.08)	189 (1.30)
300% Modulus	BS 903 Pt A2 - ISO 37	lb/in² (Mpa)	217 (1.50)	261 (1.8)	304 (2.10)	276 (1.90)	276 (1.90)
Tensile Strength	BS 903 Pt A2 - ISO 37	lb/in² (Mpa)	319 (2.20)	595 (4.10)	885 (6.10)	1610 (11.10)	2785 (19.20)
Elongation at Break	BS 903 Pt A2 - ISO 37	%	420	460	499	606	855
Tear (Die C)	ISO 34-1	KN/m	14	18.80	23.60	22.20	28.70
Tear (Trouser)	ISO 34-1	N/mm	-	-	-	-	-
Abrasion loss	DIN 53516	mm³	< 40	< 40	< 40	< 40	< 40
Resilience	ASTM D 2632-92	%	-	-	-	-	-
Specific Gravity		g/cm³	-	-	-	-	-

Notedome Ltd
Goldenacres Lane
Binley Industrial Estate
Coventry
CV3 2RT

Tel : +44 (0) 2476 635192/3
Fax : +44 (0) 2476 635509

sales@notedome.co.uk

www.notedome.com

notedome